

REMARKS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the forgoing amendments and following remarks.

The Applicants originally submitted Claims 1-43 in the application. Consistent with the Examiner's remarks in item 1, of the Office Action, the Applicants have amended the Claims to correct the inadvertent duplicate labeling of Claims 17 and 18, and renumbered all subsequent claims. In addition, Claims 1-4, 11, 16, 18-31 and 33-45 have been amended, and Claims 17 and 32 have been canceled without prejudice or disclaimer. The Applicants wish point out that the amendments to independent Claims 1, 16 and 31 are supported by the Specification (Page 14 Lines 11-20 and FIGUREs 1A, 1B, 4, 5, 6, 7, 8 and 9) and the subject matter originally recited in canceled Claims 17 and 32. Accordingly, Claims 1-16, 18-31 and 33-45 are currently pending in the application.

II. Rejection of Claims 1-4, 7, 14, 16-19, 22 and 29 under 35 U.S.C. §102

The Examiner has rejected Claims 1-4, 7, 14, 16-19, 22 and 29 under 35 U.S.C. §102(b) as being anticipated by "Development of test vehicles for evaluating plastic-encapsulant reliability and improving thermal conductivity of encapsulant materials," by Enlow *et al.* ("Enlow"). In particular, the Examiner asserts that Enlow's FIGURE 3b meets the limitations of the rejected claims because the comb patterns with narrower spacing inherently oxidize at a rate greater than the electrical component, combs with larger spacing. The Applicants respectfully maintain that Enlow fails to disclose each and every element of the inventions recited in independent Claims 1, 16 and 31.

Enlow, for example, fails to teach a sensor trace located on the insulating substrate and located between the at least two conductors, wherein the sensor trace is configured to have a positive potential greater than a potential of the at least two conductors when a voltage is applied to the sensor trace, as recited in Claim 1. Rather, to assess the anticorrosion ability of an encapsulant, Enlow uses a test vehicle containing an inter-digitated silver-comb-pattern sensor that has groups of 2, 5, 17, and 25 micron lines and spaces between the tines of the silver-comb sensors. (Page 316, Column 1, Lines 7-9). There is no disclosure by Enlow of a sensor trace between at least two conductors where the sensor is configured to have a positive potential as recited in Claim 1.

Because Enlow fails to teach all the elements as recited in Claim 1, Enlow does not anticipate Claim 1 or its dependent Claims. Analogous arguments apply to independent Claims 16 and 31, and their respective dependent claims. Accordingly, the Applicants respectfully request the Examiner to withdraw the §102 rejection with respect to Claims 1-4, 7, 14, 16-19, 22 and 29.

III. Rejection of Claims 5, 8-11, 13, 15, 20, 23-26, 28, 30-35, 37-41 and 43-45 under 35 U.S.C. §103(a)

The Examiner rejected Claims 5, 8-11, 13, 15, 20, 23-26, 28, 30-35, 37-41 and 43-45 under 35 U.S.C. §103(a) as being unpatentable over Shea as applied to Claims 1-4, 7, 14, 16-19, 22 and 29 in view of “High Reliability Plastic Packaging for Microelectronics” by Sweet *et al.* (“Sweet”), “Enhanced Moisture Protection of Electronic Devices by Ultra-Thin Polyimide films” by Burack, *et al.* (“Burack”), “A Moisture Protection Screening Test for Hybrid Circuit Encapsulants” by Mancke (“Mancke”) and “The Influence of Passivation Layer on Aluminum Corrosion on Simulated Microelectronics Circuit Pattern” by Wada, *et al.* (“Wada”). However, in a previous response filed

on December 2, 2002, the Shea reference was sworn behind by the Applicants, and the Examiner has provided new grounds for rejection (Item 7 of Office Action). Moreover, the Examiner's arguments are based on Enlow view of the above-cited reference (Item 5 of the Office Action).

The Applicants therefore have taken the Examiner's rejection to be based on Enlow in view of Sweet, Burack, Mancke, or Wada. The Applicants respectfully disagree with this rejection.

The Examiner contends that Enlow has a structure designed to have at least one component that oxidizes (creates a short) before other electrical components in the electronic circuit. The Examiner states that Enlow fails to teach an integrated circuit including the sensing device or the sensing device in the form of a serpentine trace made from the specifically claims metals. For this, the Examiner cites the final paragraph of page 27 in Sweet and Burack, Mancke or Wada.

The Applicants respectfully maintain that this combination of references fails to teach or suggest a sensor trace located on the insulating substrate and located between the at least two conductors, wherein the sensor trace is configured to have a positive potential greater than a potential of the at least two conductors when a voltage is applied to the sensor trace, as recited in Claim 1. As noted above, the Applicants can find no indication that Enlow's test vehicle contains a sensor trace located on the insulating substrate and located between the at least two conductors and having the above recited properties. Moreover, because the individual combs in the silver-comb-pattern sensor (FIGURE 3b) are made of the same silver material and have the same widths there is no inherent reason why one comb would be configured to have a positive potential greater than a potential of another comb, and neither is there such an explicit teaching in Enlow.

Sweet fails to cure the deficient teachings of Enlow in that Sweet's test structures are simply grids or tracks of interconnected bond pads (FIGURES 4, 7 and 9). As such, there is no teaching

or suggestion of a sensor trace or an oxidizable electrical component associated with the sensor trace as recited in Claim 1 or other independent Claims 16 and 31. As previously summarized in the response mailed December 2, 2002, Burack's ceramic DIP's, Mancke's triple track circuit and Wada's aluminum strips, also fail to teach or suggest a sensor trace or an oxidizable electrical component associated with the sensor trace as recited in Claim 1 or other independent Claims 16 and 31.

Thus, the combination of Enlow in view of Sweet, Burack, Mancke or Wada fails to support a *prima facie* case of obviousness of independent Claims 1, 16 or 31, and their independent claims. Accordingly, Claim 5, 8-11, 13, 15, 20, 23-26, 28, 30-35, 37-41 and 43-45 are not obvious in view of such combinations. The Applicants therefore request that the Examiner withdraw the §103 rejection of Claims 5, 8-11, 13, 15, 20, 23-26, 28, 30-35, 37-41 and 43-45.

IV. Additional References Made of Record

The Applicants believe that the additional references made of record and not relied upon by the Examiner are not particularly any more pertinent to the claimed invention than those relied on, but the Applicants retain the right to address these references in detail, if necessary, in the future.

V. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-45.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

HITT GAINES & BOISBRUN, P.C.



Charles W. Gaines

Registration No. 36,804

Dated: 5/12/03

HITT GAINES & BOISBRUN, P.C.

P.O. Box 832570

Richardson, Texas 75083

Phone: (972) 480-8800

Fax: (972) 480-8865

Email: cgaines@abstractassets.com